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FIRST REPORT OF THE

ALBERTA ENDANGERED SPECIES CONSERVATION COMMITTEE

JUNE 2000

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Message from the Minister

ALBERTA ENVIRONMENT

HON. HALVAR JONSON
MINISTER OF ENVIRONMENT

We are fortunate to share our province with a diverse variety of wild species, including plants, insects, fish, amphibians, birds and mammals. Each contributes to its particular ecosystem and the planet in its unique way.

This government demonstrated its continued commitment to wild species protection in 1997, when it made changes to the *Wildlife Act*, enabling the creation of the Endangered Species Conservation Committee (ESCC) in 1998. In 2000, an allotment of $4.7 million (over two years) allowed for substantial increases in manpower and resources to expand protection to a wider variety of species.

The ESCC is a new structure whose work is inclusive, consultative, transparent and visible. It is made up of 19 member organizations representing a wide range of sectors and concerns across the province. An independent subcommittee of respected scientists provides research data to the main committee. The Scientific Subcommittee's reports are sent to me, along with the ESCC's recommendations, for consideration.

I am pleased with the recommendations that the ESCC has made to date, and I am happy to act on them. They are reasonable, practical and well-thought-out solutions that address important concerns.

The identification and recovery of species at risk in Alberta is not a new process. It has been going on for 25 years. We have many successes to be proud of. The peregrine falcon was recently downlisted from "endangered" to "threatened." The swift fox, once extirpated, has now successfully been re-introduced. The double-crested cormorant and the American white pelican, once "endangered," are no longer on the endangered list. I anticipate more success stories like these in the future.

So far, we have identified nine species at risk to receive new or re-confirmed legal status designations, or placement in another appropriate category (e.g., "species of special concern"). This is only the first step. Along with further assessment of species, I look forward to the next phase—developing recovery plans and management plans for species at risk and implementing activities to ensure their populations are built up and maintained in the future.

Government will facilitate the recovery process by consulting with landowners and other stakeholders to make appropriate changes to regulations. We support a co-operative and consultative approach. When good will and common values exist, agreeable solutions can be found.

I would like to thank ESCC chair, Ivan Strang, MLA West Yellowhead, the committee members and the Scientific Subcommittee members for their remarkable commitment to the health and well-being of Alberta's wild species.

All Albertans are encouraged to take part in the recovery efforts of our species at risk. Everyone can participate by being aware of these species and sharing information with others.

Hon. Halvar Jonson

"The ESCC is a new structure whose work is inclusive, consultative, transparent and visible."

ALBERTA ENVIRONMENT

Message from the Chair

IVAN STRANG
MLA WEST YELLOWHEAD

"We have developed a way of operating that is based on honest and open discussion . . . ."

I am pleased to present this progress report on the activities of the Endangered Species Conservation Committee (ESCC), both as a historical record and information resource for Albertans.

The ESCC was created to help the government protect Alberta's wild species. The committee is composed of a cross-section of Albertans, including resource users, land managers, conservation groups and scientists. We work together to identify Alberta's vulnerable species as early as possible and recommend immediate actions and long-term options.

I am proud of what the committee has achieved in a relatively short space of time. First, we developed our terms of reference and structure. To fill the need for complete, reliable and unbiased information on Alberta's species, we recruited a highly regarded team of scientists to form an independent Scientific Subcommittee.

We took a great deal of care to create a thorough process that will provide ongoing recommendations to Alberta's Environment Minister. We use internationally recognized objective criteria, which leads to consistent and easily understood decisions regarding species status. The short-term recovery recommendations are designed to set the stage for long-term actions by biologists and stakeholders working together.

Most importantly, we have developed a way of operating that is based on honest and open discussion that aims for consensus. In May 2000, in conjunction with Alberta Environment, we announced new or additional protective measures for nine species at risk. For most of these species, there are new or reconfirmed legal status designations. We introduced a new "species of special concern" category as a first step in preventing vulnerable species from becoming threatened or endangered. This proactive approach will pay off in the long run, as prevention is far more effective and economical than recovery.

This is an ongoing process. In the future, the committee will continue to evaluate species at risk using the most complete information available. We will also work toward assessing all of Alberta's at risk animals and plants.

I would like to thank the committee members and all the Albertans they consulted for their diligence and outstanding commitment to a common goal—the prevention of extinction. Thank you also to the Scientific Subcommittee members for their valuable input.

On behalf of the ESCC, I would like to express our appreciation to Honourable Halvar Jonson, Minister of Environment, and the Alberta Environment department for their commitment and support of wild species protection.

Ivan Strang

101-03724/

Alberta and Its Species at Risk

Alberta has a rich natural heritage. The province has hundreds of species of vertebrate animals, and thousands of species of plants and invertebrates, whose populations are healthy and stable. However, the populations of some wild species have decreased to such an extent that they can no longer sustain themselves. Other species are in danger of reaching this point.

In response, the Alberta government has developed a process to prevent "species at risk" from becoming extinct or extirpated. The approach is innovative and practical, and allows the incorporation of broad social and economic values into the process. It is also cooperative and collaborative, and is backed up by provincial legislation (the *Wildlife Act*). The process relies on sound science plus a realistic understanding of land use and land management, both of which are needed for the effective management and recovery of species at risk.

The Alberta approach relies upon the activities of the Endangered Species Conservation Committee (ESCC) and its scientific arm, the Scientific Subcommittee, both created under the auspices of the *Wildlife Act* in 1998.

The main role of the ESCC is to advise the Minister of Environment on matters related to the identification, conservation and recovery of species at risk in Alberta.

Its specific functions are:

- to recommend the necessary legal designation and protections for threatened and endangered species in Alberta;
- to facilitate the planning and implementation of conservation programs and recovery plans for species at risk; and
- to recommend actions that will prevent species from becoming at risk in the future.

Appendixes 1 and 2 provide the Policy Statement and Terms of Reference of the ESCC.

The Scientific Subcommittee is an independent subcommittee of the ESCC. Its purpose is to study the scientific information available on species identified as potentially at risk in Alberta. The Scientific Subcommittee provides the ESCC with its analysis of the biological status of the species at risk and recommends an appropriate status designation. It may also suggest immediate actions that need to be taken to protect the species. The ESCC evaluates this assessment in making its recommendations to the Minister of Environment, and includes it with its report to the Minister. Appendix 3 details the Terms of Reference of the Scientific Subcommittee.

The creation of the ESCC has added a new dimension to the ongoing process of species assessment carried out in Alberta. The result will be clear identification of species at risk and the timely development of recovery plans and management programs for these species.

ROB BURNETT

STUDENT WITH NORTHERN SAW-WHET OWL—VOLUNTEERS CAN HELP WITH LONG-TERM MONITORING PROJECTS

Definitions Used by the Endangered Species Conservation Committee

Species at Risk: A species at risk of extinction or extirpation (endangered or threatened), or a species that needs special management attention to prevent it from becoming at risk.

Extinct: A species that no longer exists.

Extirpated: A species no longer existing in the wild in Alberta but occurring elsewhere in the wild.

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species likely to become endangered if limiting factors are not reversed.

Species of Special Concern: A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

Data Deficient: A species for which there is insufficient scientific information to support status designation.

These definitions are based on those used by COSEWIC (see page 6). For more information see the COSEWIC website <www.cosewic.gc.ca>.

In Alberta, a recovery plan is prepared by a recovery team consisting of scientists, government wildlife managers, members of conservation groups and interested stakeholders. Stakeholders include individuals and organizations that own, manage and/or use the land upon which the species relies.

A recovery plan outlines known information about a species and its habitat (and threats to them), as well as what data is needed to assist the species' recovery, both long-term and short-term goals for recovery, and the actions needed to achieve these goals.

Alberta recovery plans are dynamic documents that identify and guide recovery actions in Alberta. They normally reflect and fulfill strategies identified in national recovery plans.

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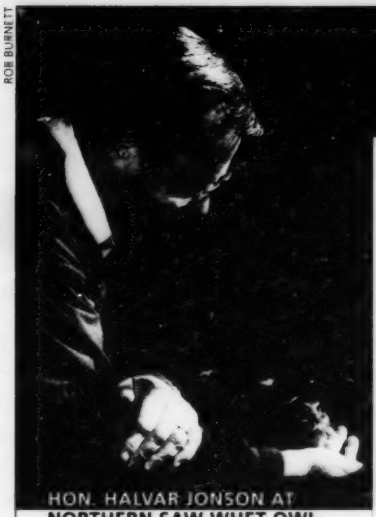
Alberta's Strategy to Protect Species at Risk



ROB BURNETT

HON. HALVAR JONSON AT NORTHERN SAW-WHET OWL MONITORING SITE

Species Assessed by the Alberta Endangered Species Conservation Committee between July 1999 and January 2000 and Announced by the Minister of Environment

Endangered Species
1. Swift fox (*Vulpes velox*)
2. Sage grouse (*Centrocercus urophasianus*)
3. Piping plover (*Charadrius melodus*)

Threatened Species
1. Burrowing owl (*Athene cunicularia*)
2. Peregrine falcon (*Falco peregrinus*)

Species of Special Concern
1. Sprague's pipit (*Anthus spragueii*)
2. Long-toed salamander (*Ambystoma macrodactylum*)

Data Deficient Species
1. Prairie rattlesnake (*Crotalus viridis*)

In Process
1. Western blue flag (*Iris missouriensis*)[1]

[1]Although the ESCC has proposed a "threatened" designation for this species, the first step is to consult with landowners on appropriate conservation actions.

The Endangered Species Conservation Committee (ESCC) is part of an overall process of wild species conservation in Alberta that incorporates both provincial and national goals and strategies.

In Alberta, species potentially at risk of extinction or extirpation are first identified through a Natural Resources Service, Alberta Environment, process that ranks the general status of each Alberta species. The purpose of this "coarse filter" process is to assign initial priorities for species assessment, data collection and species management. The Natural Resources Service publishes reports on the general status of Alberta wildlife every five years. The next edition is to be completed in 2001 (see the sidebar for how to get your copy of the 1996 report).

If a species has been identified as being at risk, the Natural Resources Service and Alberta Conservation Association jointly prepare a detailed Alberta status report. Using this report, and any relevant additional information, the Scientific Subcommittee of the ESCC then assesses what the risk of extinction or extirpation is for that species in Alberta. In this process, the national Committee on the Status of Endangered Wildlife in Canada (COSEWIC) rating (see page 6) for the species is considered, but Alberta's assessment may differ because it is related only to the status of the species within the province.

The information gathered by the Natural Resources Service, and the Scientific Subcommittee evaluation, are summarized and presented to the ESCC. The committee then decides what recommendations to make to the Minister of Environment concerning the legal designation, management and recovery of the species.

If a species is legally designated under the *Wildlife Act*, the Minister of Environment will prepare a recovery plan for the species. The role of the ESCC in this process is:

- to identify appropriate stakeholders to assist scientists in preparing the recovery plan;
- to review and provide advice on a draft plan; and
- to facilitate appropriate public review of, and input into, a recovery plan.

A document called an *Initial Conservation Action Statement* briefly summarizes the recommendations of the ESCC concerning actions that should be taken by Alberta to conserve a species, including immediate actions needed while a recovery plan is being put in place. (By signing the *Accord for the Protection of Species at Risk in Canada* in 1996 [see page 6], Alberta committed to the prompt development of recovery plans—one year [from the

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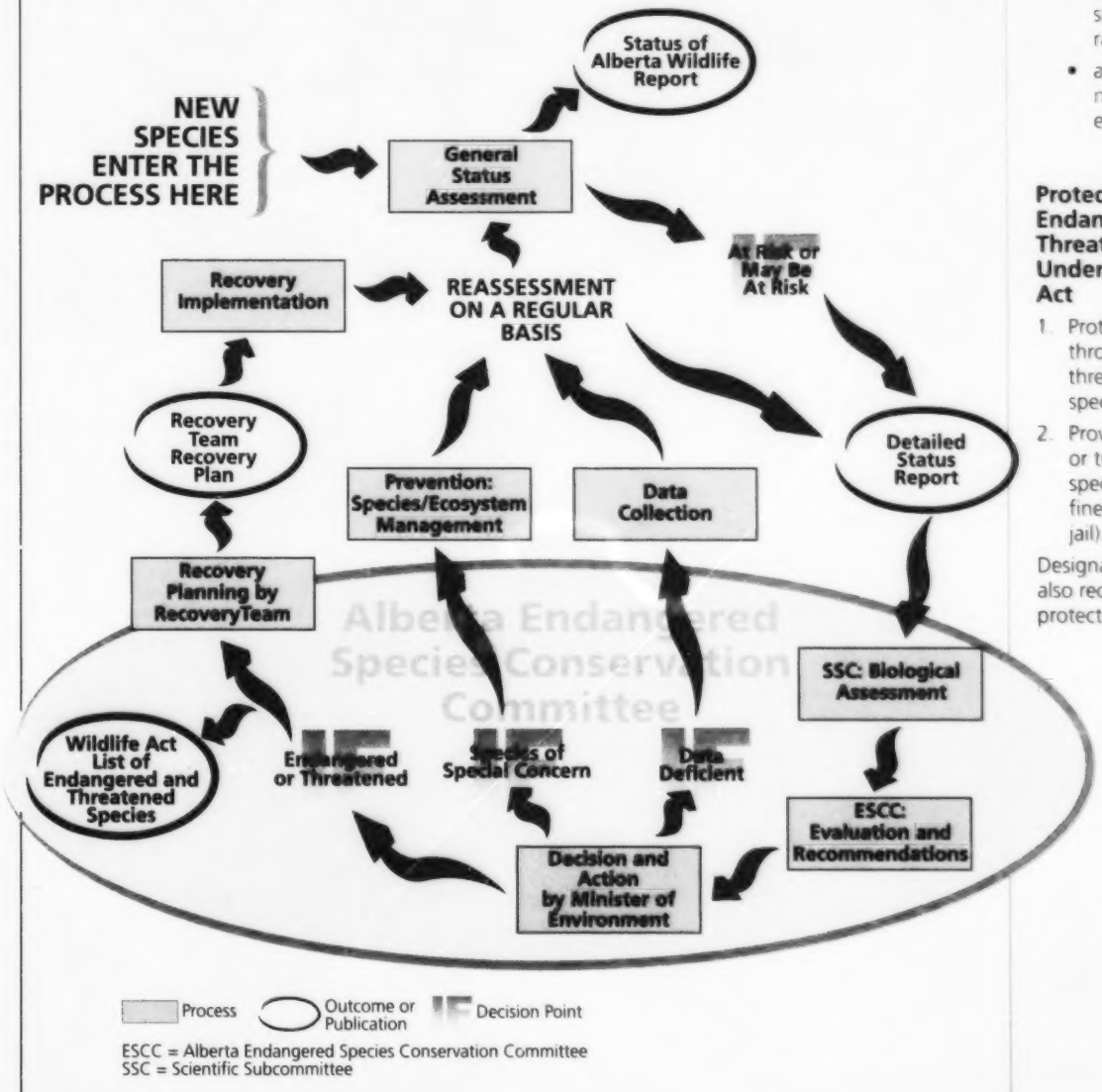
time the species is officially designated] for endangered species; two years for threatened species.) An *Initial Conservation Action Statement* is implemented immediately upon approval by the Minister of Environment.

In keeping with commitments made under the accord, Alberta must also prevent species from becoming at risk. This action is cost-effective because it is less costly to manage for prevention than to recover an endangered or threatened species. The ESCC also recommends to the Minister of Environment management strategies that will prevent a species from becoming at risk. Thus far, assessed species that are not at immediate risk of extinction or extirpation have been identified as "species of special concern" or "data deficient".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Detailed Status Report
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ESCC = Alberta Endangered Species Conservation Committee
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Initial Conservation Action Statements: What They Contain

1. Species description
2. Alberta status (and rationale for status rating) as assessed by the Scientific Subcommittee of the ESCC
3. Initial conservation responses recommended by the ESCC, including
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Protection for Endangered and Threatened Species Under Alberta's Wildlife Act

1. Protects nests and dens throughout the year of both threatened and endangered species.
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Designated non-game species also receive some specific protections.

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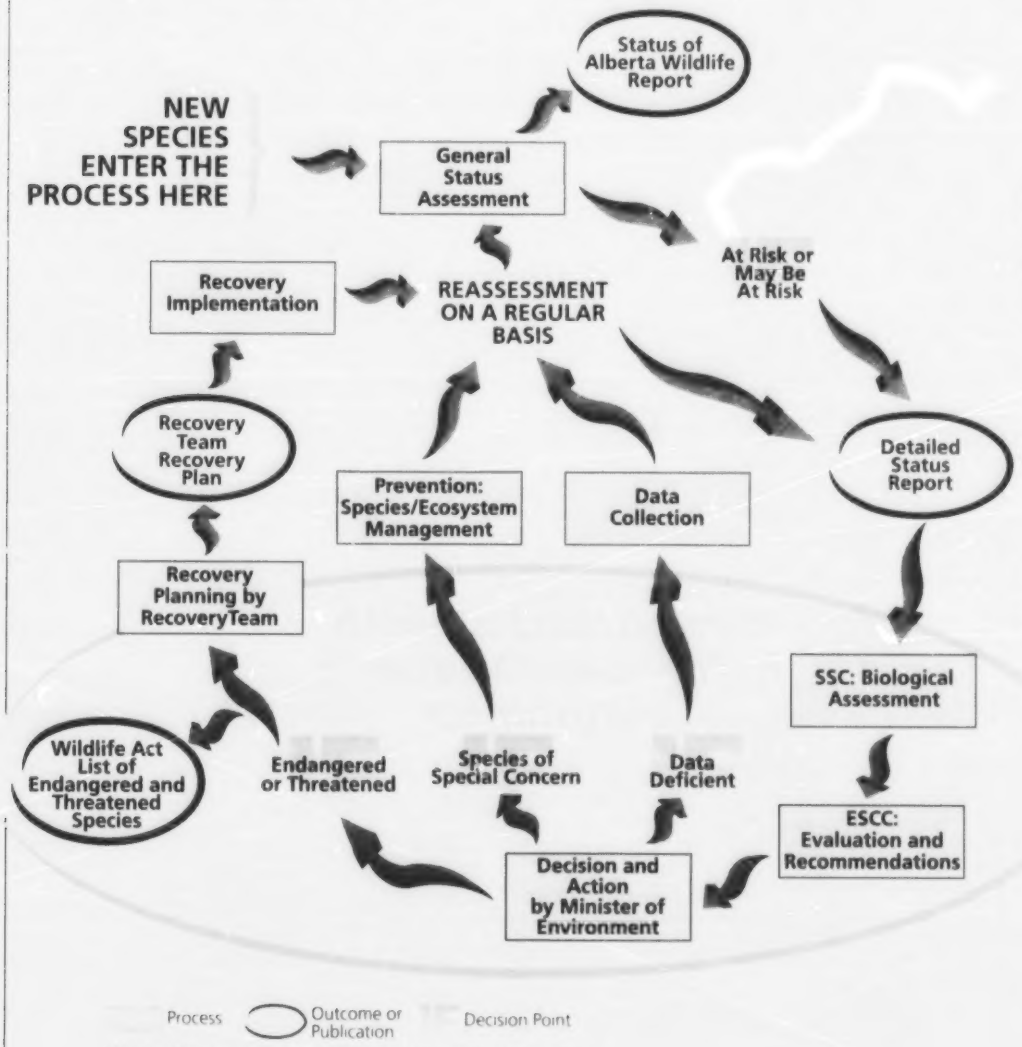
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WAYNE LYNCH

LOGGERHEAD SHRIKE (SPECIES OF SPECIAL CONCERN STATUS RECOMMENDED BY ESCC)

Some Helpful Websites

Provincial

Alberta's Threatened Wildlife
www.gov.ab.ca/env/fw/threatsp/index.html

Alberta Natural Heritage Information Centre
www.gov.ab.ca/env/parks/anhic/anhic.html

Federal

Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
www.cosewic.gc.ca

Accord for the Protection of Species at Risk in Canada
www.ec.gc.ca/press/wild_b_e.htm

Species at Risk in Canada
www.cws-scf.ec.gc.ca/sara/main.htm

International

World Conservation Union (IUCN)[1]
http://iucn.org/themes/ssc/siteindx.htm

[1]The World Conservation Union has kept its former acronym—IUCN.

What Happens at the National Level

There are two key cooperative processes that have driven endangered species conservation efforts nationally. One is the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which was created by federal and provincial wildlife Ministers in 1977. This committee, which includes government, academic and non-academic experts, identifies wild species at risk of extinction in Canada.

In order to facilitate recovery of those species identified by COSEWIC as at risk of extinction, the committee on the Recovery of Nationally Endangered Wildlife (RENEW) was created by the Wildlife Ministers' Council of Canada in 1988. This committee oversees the development and implementation of recovery plans for species identified as "threatened" or "endangered" nationally. Alberta participates on all national recovery teams for COSEWIC-designated species at risk in the province.

The *Accord for the Protection of Species at Risk in Canada*, which Alberta signed in 1996, committed federal, provincial and territorial governments to increased cooperation and action on the conservation of species at risk. The formation of the Endangered Species Conservation Committee was one of the means by which Alberta began to meet its commitments under the accord.

LONG-BILLED CURLEW (SPECIES OF SPECIAL CONCERN STATUS RECOMMENDED BY ESCC)

WAYNE LYNCH

The Alberta Endangered Species Conservation Committee

GORDON COURT

WHOOPING CRANE
(ENDANGERED STATUS IN ALBERTA)

The Alberta Endangered Species Conservation Committee (ESCC) meets quarterly and had its first meeting in September 1998. Its decisions are usually made by consensus but can be made by a two-thirds majority when consensus is not possible. The committee's Chair, Ivan Strang, MLA for West Yellowhead, was appointed by a previous Minister of Alberta Environmental Protection in 1998.

The Alberta approach to assisting species at risk involves using both scientific expertise and the knowledge of those who own, manage and use the land on which wild species depend. Therefore, the ESCC includes members of the scientific/academic community (apart from the Scientific Subcommittee), plus representatives of organizations that are land use managers, resource users, conservation groups and government departments. By including all these stakeholders, the development and implementation of workable conservation management programs and recovery plans for species at risk are assured.

The ESCC is made up of the following individuals and organizations (member organizations are listed in alphabetical order):

Chair

Ivan Strang, MLA for West Yellowhead

Members

Alberta Association of Municipal Districts and Counties
Alberta Cattle Commission
Alberta Environment
Alberta Fish and Game Association
Alberta Forest Products Association (2 members)
Alberta Irrigation Projects Association
Alberta Native Plant Council
Calgary Zoo
Canadian Association of Petroleum Producers
Federation of Alberta Naturalists
Special Areas Board
The Wildlife Society - Alberta Chapter
Treaty 8 First Nations of Alberta
University of Alberta (Dept. of Biological Sciences)
University of Calgary (Dept. of Biological Sciences)
Western Stock Growers' Association

Ex-officio Representatives

Alberta Agriculture, Food and Rural Development
Alberta Conservation Association
Alberta Resource Development

The Chair and Ex-officio Representatives do not vote. All other members have one vote.

For more information about these organizations, see their websites on the inside back cover.

ENDANGERED SPECIES CONSERVATION COMMITTEE MEMBERS (WITH WHOOPING CRANE) AT CALGARY ZOO MEETING IN APRIL 2000

ALBERTA ENVIRONMENT

The Scientific Subcommittee of the Alberta Endangered Species Conservation Committee

GORDON COURT

FERRUGINOUS HAWK
(THREATENED STATUS IN ALBERTA)

The Scientific Subcommittee is made up of independent scientists who review the best scientific information available on a species that may be at risk in Alberta and assess what the biological status of that species is in the province. The subcommittee sends its assessment and related recommendations to the Endangered Species Conservation Committee.

The Scientific Subcommittee has adopted the species evaluation method used by the IUCN (now the World Conservation Union, formerly the International Union for the Conservation of Nature and Natural Resources)[1]. This method is the same as that used by COSEWIC at the national level, and using it ensures that Alberta's assessments can be compared with those done nationally. As well, having an internationally accepted, open and transparent process of evaluation enhances the credibility of the scientific assessments.

When evaluating a species (using the IUCN criteria/guidelines), the Scientific Subcommittee considers a range of information about the species' status in Alberta. Population size, changes in population size, and the size of the area in which the species is found are very significant. Other population characteristics, such as fragmentation, isolation and status in adjacent regions are also considered before the subcommittee recommends a status.

The present Scientific Subcommittee is composed of a small group of scientists with significant scientific expertise related to vertebrate animals (including mammals, amphibians, reptiles, birds and fish), invertebrates (including insects and spiders) and plants, as well as in the general fields of biology, botany, ecology, forestry, wildlife management and wildlife conservation.

Members of the Scientific Subcommittee (in alphabetical order) are as follows:

Dr. René J. Belland, Director of Research, Devonian Botanic Garden, Edmonton, Alberta

Cheryl Bradley, Professional Biological Consultant, Lethbridge, Alberta

Dr. Fiona Schmiegelow, Assistant Professor, Department of Renewable Resources, University of Alberta, Edmonton, Alberta

Dr. John Spence, Professor, Department of Biological Sciences, University of Alberta, Edmonton, Alberta

Dr. Brad Stelfox, Professional Biological Consultant, Bragg Creek, Alberta, was a member of the Scientific Subcommittee until April 2000, when he resigned because of time constraints

William D. Wishart, Retired Director of Research, Fish and Wildlife Management Division, Alberta Environment; now Adjunct Professor, Department of Biological Sciences, University of Alberta, and Research Associate, Provincial Museum of Alberta, Edmonton, Alberta

[1]The World Conservation Union has kept its former acronym—IUCN.

Achievements of the Alberta Endangered Species Conservation Committee

The Alberta Endangered Species Conservation Committee has been meeting since September 1998 and has accomplished a great deal in its short tenure. It has:

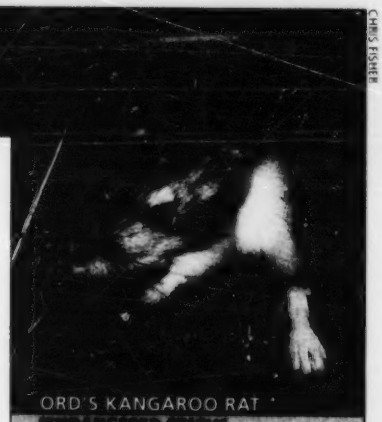
- developed and revised operational procedures for itself;
- defined guidelines for determining what species are endangered or threatened in Alberta (the committee did a detailed review of the IUCN guidelines);
- proposed and developed workable definitions related to endangered species assessment with which government and organizations can work;
- created and provided general guidelines to the independent Scientific Subcommittee, and appointed its members;
- endorsed the species assessment criteria developed by the Scientific Subcommittee for species potentially at risk;
- received 12 assessments carried out by the Scientific Subcommittee; and
- passed recommendations concerning the legal designation, management and recovery of these 12 species to the Minister of Environment (the Minister has responded and taken action on the first 9 species).

List of Species Currently Listed under the *Wildlife Act*, and New Species Assessed by the Alberta Endangered Species Conservation Committee Since its Inception

Species	Former Designation (1998)	Recommendations SSC	Recommendations ESCC	Current Designation (2000)
ENDANGERED (2000)				
Swift fox (*Vulpes velox*)	EN	EN Sep-99	EN Oct-99	EN
Bison (*Bison bison*)[1]	EN	-	-	EN
Whooping crane (*Grus americanus*)	EN	-	-	EN
Sage grouse (*Centrocercus urophasianus*)	GA	EN Jun-99	EN Jul-99	EN
Piping plover (*Charadrius melodus*)	TH	EN Dec-99	EN Jan-00	EN
THREATENED (2000)				
Woodland caribou (*Rangifer tarandus caribou*)	TH	-	-	TH
Barren ground caribou (*Rangifer tarandus groenlandicus*)	TH	-	-	TH
Northern leopard frog (*Rana pipiens*)	TH	-	-	TH
Trumpeter swan (*Cygnus buccinator*)	TH	-	-	TH
Ferruginous hawk (*Buteo regalis*)	TH	-	-	TH
Burrowing owl (*Athene cunicularia*)	TH	TH Sep-99	TH Oct-99	TH
Peregrine falcon (*Falco peregrinus*)	EN	TH Jun-99	TH Jul-99	TH
OTHER FORMS OF PROTECTION PROPOSED (2000)				
Sprague's pipit (*Anthus spragueii*)	NG	SC Jun-99	SC Jul-99	NG(SC)♦
Long-toed salamander (*Ambystoma macrodactylum*)	NG	SC Dec-99	SC Jan-00	NG(SC)♦
Prairie rattlesnake (*Crotalus viridis*)	NG	DD Dec-99	DD Jan-00	NG(DD)♦
IN PROCESS (2000)				
Western blue flag (*Iris missouriensis*)	-	TH Sep-99	TH Oct-99	*IP*
Ord's kangaroo rat (*Dipodomys ordii*)	NG	EN Mar-00	EN Apr-00	*IP*
Loggerhead shrike (*Lanius ludovicianus*)	NG	SC Mar-00	SC Apr-00	*IP*
Long-billed curlew (*Numenius americanus*)	NG	SC Mar-00	SC Apr-00	*IP*

EN – Endangered; **TH** – Threatened; **GA** – Game Animal; **NG** – Non-game Animal; ♦ – Legal designation is Non-game Animal, species further described as either **SC** – Species of Special Concern or **DD** – Data Deficient; ***IP*** – In Process.

[1] Only bison (*Bison bison*) that are found, killed or captured on the land within the boundaries described in the regulation are endangered animals. The regulation has a detailed description of northwestern Alberta around the Hay-Zama lakes, north and west to the N.W.T. and B.C. borders.



CHRIS FISHER

ORD'S KANGAROO RAT
ENDANGERED STATUS RECOMMENDED BY ESCC

Future Activities of the Alberta Endangered Species Conservation Committee

In the next year the Alberta Endangered Species Conservation Committee hopes to accomplish the following:

- continue ongoing assessments of species potentially at risk in Alberta (optimum is three species per meeting) and make its recommendations about these species to the Minister of Environment;
- facilitate the planning, review and implementation of recovery plans for endangered and threatened species, including enabling stakeholders to participate in the process;
- review and facilitate public input into draft recovery plans;
- further identify and define new status categories of species at risk, as necessary; and
- continue revisions of its operational procedures.

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ORD'S KANGAROO RAT
(ENDANGERED STATUS RECOMMENDED BY ESCC)

Future Activities of the Alberta Endangered Species Conservation Committee

In the next year the Alberta Endangered Species Conservation Committee hopes to accomplish the following:

- **continue ongoing assessments of species potentially at risk in Alberta (optimum is three species per meeting) and make its recommendations about these species to the Minister of Environment;**
- **facilitate the planning, review and implementation of recovery plans for endangered and threatened species, including assisting stakeholders to participate in the process;**
- **review and facilitate public input into draft recovery plans;**
- **further identify and define new status categories of species at risk, as necessary; and**
- **continue revisions of its operational procedures.**

VOLUNTEER TAKING PART IN A GARTER SNAKE DEN RELOCATION PROJECT

Future Activities of the Scientific Subcommittee of the Alberta Endangered Species Conservation Committee

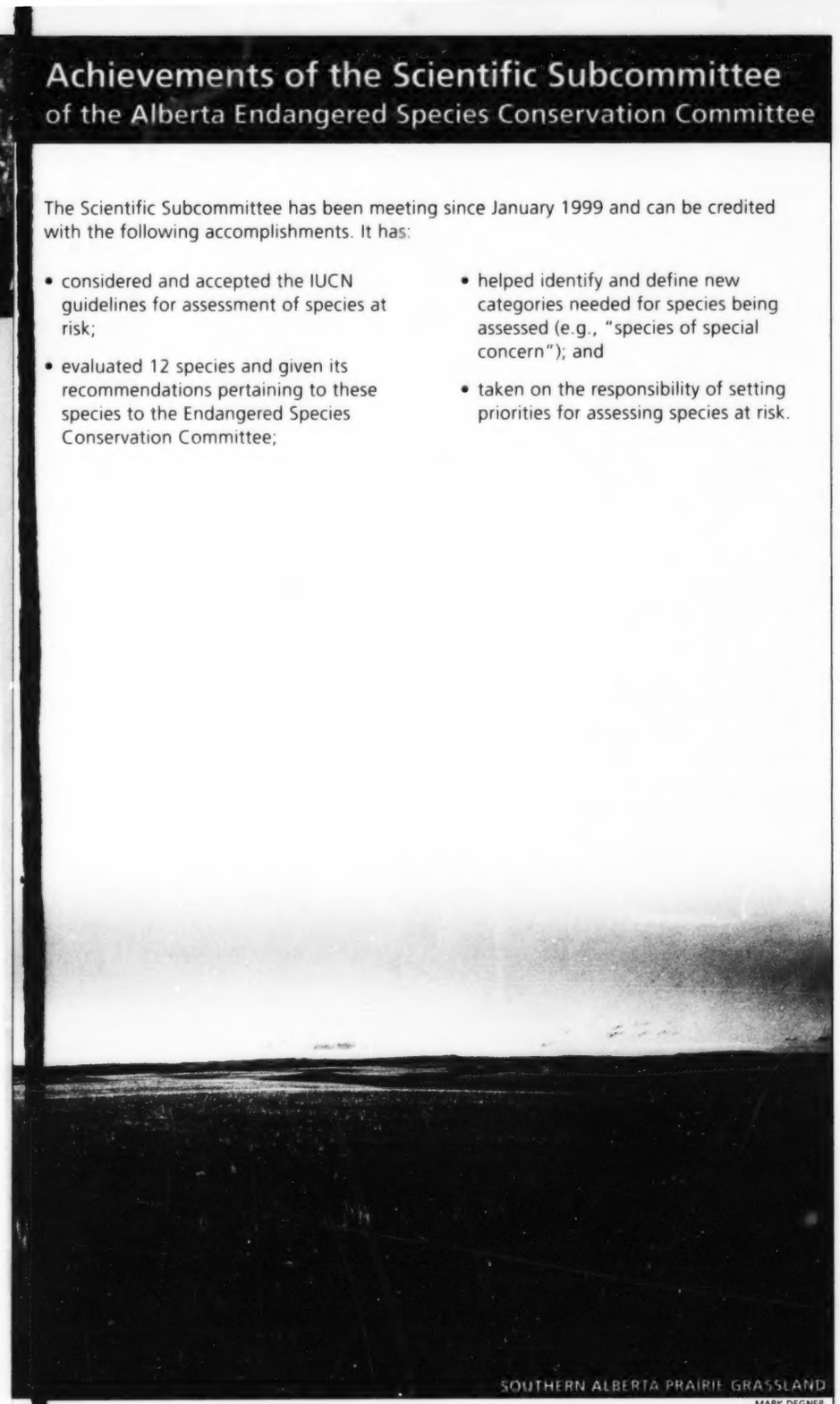
The Scientific Subcommittee plans to accomplish the following activities within the next year. It will:

- continue to evaluate species potentially at risk in Alberta and pass on its recommendations to the Endangered Species Conservation Committee;
- identify plants that are a priority for data collection and detailed status report production;
- recommend new status categories for species being evaluated, as needed; and
- expand its membership.

Achievements of the Scientific Subcommittee of the Alberta Endangered Species Conservation Committee

The Scientific Subcommittee has been meeting since January 1999 and can be credited with the following accomplishments. It has:

- considered and accepted the IUCN guidelines for assessment of species at risk;
- evaluated 12 species and given its recommendations pertaining to these species to the Endangered Species Conservation Committee;
- helped identify and define new categories needed for species being assessed (e.g., "species of special concern"); and
- taken on the responsibility of setting priorities for assessing species at risk.



SOUTHERN ALBERTA PRAIRIE GRASSLAND
MARK DEGNER

9 Species Announced by the Minister of Environment

IDENTIFICATION
CONSERVATION
RECOVERY

MAY 2000

WAYNE LYNCH

DESCRIPTION

E N D A N G E R E D

SWIFT FOX (*Vulpes velox*)

An adult swift fox is about the size of a large house cat (and half the size of a red fox), weighing 2 to 3 kilograms. It is lean and well-adapted for speed, having been clocked running at over 50 kilometres per hour.

Swift foxes use underground burrows or dens throughout the year—for protection against predators and poor weather, and as a place to rear their young. These foxes may dig their own burrows or may modify dens left by badgers or Richardson's ground squirrels (gophers).

History

The swift fox was once common on the prairies. Historically, it was found in shortgrass and mixedgrass prairie regions from southwestern Manitoba west to the foothills of the Rocky Mountains and from central Alberta southwards throughout the midwestern United States to Texas. Alberta populations ranged north to about the 53rd parallel.

These foxes were trapped for their fur in the mid-1800s, but populations declined dramatically in the late 1800s as native grasslands were converted to agricultural land. Continued loss of habitat, along with competition from other species, particularly coyotes, susceptibility to trapping and poisoning programs meant for other animals, and severe climatic conditions all led to the extirpation of the swift fox from Canada by the 1930s.

Captive breeding of swift foxes began in 1973 through a privately run program. In 1978, the species was officially designated as Extirpated in Canada by COSEWIC, and a national recovery plan was approved in 1995 to reintroduce swift foxes and create a self-sustaining Canadian population. The species is now listed as "endangered" by COSEWIC.

Swift foxes were first officially released in Alberta in 1983. By 1996, 540 foxes had been released in the Alberta-Saskatchewan border and Milk River Ridge areas, parts of the species' native range. Most animals released were bred in captivity; the remainder were wild-born animals imported from the United States.

At present, it is estimated that there are approximately 96 swift foxes in Alberta, most of them the offspring of released foxes. The population is stable or increasing slightly, but the species remains extremely vulnerable because of its small numbers and limited distribution.

Management

Because the swift fox is designated as "endangered" under the Alberta *Wildlife Act*, it is a protected species. It is illegal to harm a swift fox or disturb its dens anywhere or at anytime in Alberta.

An Alberta recovery plan for the swift fox will be developed by 2002. The standard 12-month goal to develop a recovery plan for an endangered species was extended to allow completion of a cooperative international census of swift fox in the winter of 2000-2001.

While the provincial recovery plan is being prepared, government land use management systems will be strengthened to make sure there is no loss of swift fox dens due to managed activities (e.g., industry, agriculture, recreation). Because some dens are on private land, property owners will be contacted so that they can take part in voluntary conservation efforts or cooperative management strategies.

STATUS

Alberta: Endangered; status maintained in 2000

Saskatchewan: Endangered

Canada (COSEWIC): Extirpated in 1978; downlisted to Endangered in 1999

USA: Candidate for listing

E N D A N G E R E D

SAGE GROUSE (*Centrocercus urophasianus*)

History

In Alberta, the sage grouse is found in the extreme southeast corner of the province, east of Milk River and south of the Cypress Hills. Its habitat is sagebrush flats, which exist only in the shortgrass prairie.

This species has lost much of its historical habitat through the conversion of sagebrush habitat to cropland. It once inhabited an area of 49 000 km² in southeastern Alberta, but by 1968, that area had diminished to 4000 km².

The sage grouse population has declined drastically (80 percent between 1968 and 1997; 50 percent in the last decade). At present, there are only about 560 sage grouse in Alberta, and surrounding populations do not appear to be sustaining Alberta's numbers.

Management

The sage grouse has been designated as an "endangered" species under the Alberta *Wildlife Act*. It is illegal to hunt or harm this grouse, or disturb its nests in Alberta at any time.

The status of sage grouse in Alberta depends upon the quantity and quality of grassland/sagebrush cover. The breeding success of these birds is probably negatively affected by oil and gas development, road building, and overgrazing and disturbance by cattle at lek sites.

An interprovincial sage grouse recovery team was formed in 1997. This team will submit a draft recovery plan to the Alberta Minister of Environment in 2001. In the meantime, sage grouse leks and adjacent nesting areas are being protected. Most leks are on crown land, and conservation and management will take place through negotiation with disposition holders. Public access and recreation activity in lek areas require immediate management. Conservation and protection of leks on private land are to be based on stewardship agreements with landowners.

Population monitoring, as well as research into such important factors as habitat selection and use will support the recovery planning effort. An important recommendation of the ESCC to the Minister of Environment was that a pilot project be undertaken to develop grazing strategies that will best enhance sage grouse survival and productivity.

DESCRIPTION

The largest of all North American grouse, the sage grouse depends almost entirely on sagebrush (*Artemisia* species) for food and cover. This grouse likely winters within or near its summer range.

In spring, groups of sage grouse gather at traditional courtship "leks" or dancing grounds. The males inflate air sacs at their upper chests, puff out their white chest feathers, spread their pointed tail feathers and strut—snorting, grunting, hooting and booming as they go—to intimidate other males and attract females.

STATUS

Alberta: Endangered (as of 2000)
Saskatchewan: Endangered
British Columbia: Extirpated

Canada (COSEWIC): Endangered (Prairie Population); uplisted from Threatened in 1998

USA: Has been petitioned to list as Threatened federally; Washington State—Endangered; Arizona, Kansas, Nebraska, New Mexico, Oklahoma—Extirpated

DESCRIPTION

An adult swift fox is about the size of a large house cat (and half the size of a red fox), weighing 2 to 3 kilograms. It is lean and well-adapted for speed, having been clocked running at over 50 kilometres per hour.

Swift foxes use underground burrows or dens throughout the year—for protection against predators and poor weather, and as a place to rear their young. These foxes may dig their own burrows or may modify dens left by badgers or Richardson's ground squirrels (gophers).

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At present, it is estimated that there are approximately 96 swift foxes in Alberta, most of them the offspring of released foxes. The population is stable or increasing slightly, but the species remains extremely vulnerable because of its small numbers and limited distribution.

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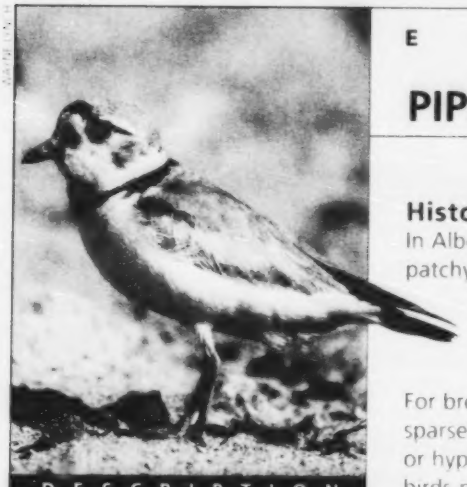


E N D A N G E R E D

PIPING PLOVER (*Charadrius melodus*)

DESCRIPTION

The piping plover is a stocky little shorebird occasionally seen on the isolated beaches, mudflats and sandflats of lakes and sloughs.

Its nest is a shallow scrape (bowl) in sand or gravel, usually lined with pebbles. A piping plover adult will vigorously defend the nest and will feign a wing injury to lure a predator away.

The piping plover feeds along shorelines close to the water's edge. It eats aquatic worms and other invertebrates from the ground, using a run-and-stop feeding technique.

This species is migratory, staying in Alberta from late April to early August.

History

In Alberta, the piping plover has a patchy distribution across parkland and grassland areas, mostly in the east-central part of the province.

For breeding, it prefers unvegetated or sparsely vegetated beaches of alkaline or hyper-saline lakes or ponds, and the birds nest wherever they can find suitable habitat. As a result, the use of specific lakes within the piping plover's Alberta range, as well as the population size, vary from year to year. The majority of the Alberta population of 220 to 300 birds is generally found on fewer than 10 lakes in any one year.

The piping plover depends on natural water fluctuations to remove vegetation and expose appropriate nesting habitat on lake or pond shorelines, so problems may result when water levels of lakes are stabilized for recreation or other uses. Breeding success can also be negatively influenced by predation, livestock activity, off-road vehicles and competition with people for the use of beaches.

The North American population of this species is declining. Although Alberta's piping plovers are part of a relatively stable prairie population, evidence indicates that they are no longer breeding on lakes where they have traditionally been found. Therefore, strong conservation measures are needed.

Management

The piping plover is an "endangered" species in Alberta, and it is illegal to harm this bird or its nests in the province, anywhere or at any time.

The Alberta government has been monitoring the piping plover population in the province since the 1980s. Management to support this species has included protecting habitat by means of land purchase or long-term agreements with landowners, fencing critical shorelines to keep cattle away, management of water levels and vegetation on traditional nesting beaches, and public education. Alberta also participates on a national recovery team for the piping plover. However, after 10 years of management, the Alberta piping plover population remains very small and vulnerable.

Key to conserving this species is the continued and increased protection of its nesting sites from disturbance. Because the breeding population moves between lakes, all potential breeding sites have to be protected, even when they are not in use, to prevent any reduction in habitat.

A provincial recovery plan for the piping plover will be completed in 2002. Pending the completion and implementation of the recovery plan, government land use management systems on crown land and for government-regulated activities will be strengthened to ensure no loss of nests due to managed activities. As well, landowners and disposition holders will be contacted to put in place voluntary conservation measures and/or negotiate cooperative management strategies.

STATUS

Alberta: Endangered; uplisted from Threatened in 2000

Saskatchewan/ Manitoba: Endangered

Canada (COSEWIC): Endangered

USA: Great Lakes population—Endangered; Great Plains and Atlantic populations—Threatened

T H R E A T E N E D

BURROWING OWL (*Athene* [formerly *Speotyto*] *cunicularia*)

History

In Alberta, this species inhabits areas of dry shortgrass prairie in the grassland natural region of the southeastern part of the province. Historically, its range extended into the southern parkland region. At present, most of the Alberta's burrowing owls are found in areas grazed by livestock.

The burrowing owl population in Canada and Alberta has suffered a serious decline. A 1994-1995 survey resulted in an estimate of 842 pairs in the province. These figures indicate about a 30 percent decline in Alberta in 10 years.

Cultivation of the grasslands in Alberta, which was extensive in 1976 to 1986, destroys burrows and reduces hunting territory. Habitat has also been lost through oil and gas exploration and development, road construction and expansion of human settlement. Populations of ground squirrels, badgers and other burrowing animals have decreased, reducing the number of burrows available for burrowing owl nesting.

Burrowing owls have also been accidentally poisoned through programs aimed at ground squirrels and insects. Use of agricultural chemicals has been linked to a reduction in the number of young produced by the owls. Some owls have been killed by vehicle collisions and others shot (mistakenly or not) at their burrows. The burrowing owl's close association with Richardson's ground squirrels (gophers) has been to its detriment.

Management

A national recovery plan for the burrowing owl has been in place since 1995. However, recovery efforts have not been successful at stopping the decline in the burrowing owl population or identifying the key factors causing the decline. Attempts to reverse the population trend have been hampered by a lack of information about changes on the owl's breeding grounds. Recent evidence suggests that decreasing prey abundance on the prairies (and consequent reductions in owl productivity) may be a key factor in the decreasing owl numbers.

A provincial recovery plan to assist this species will be completed by 2001. While the recovery plan is being developed, policy and management to ensure protection of all burrowing owl nests on crown land is to be implemented. Essential conservation actions will include the expanded monitoring of distribution, nesting productivity and population trends. A non-government program, Operation Burrowing Owl, encourages landowners to voluntarily protect burrowing owl nest sites on their properties (see <www.unibase.com/~naturesk/burrowl.html>).

DESCRIPTION

The burrowing owl is a small owl that lives in the open grasslands of southeastern Alberta. It nests in an unoccupied burrow of a ground squirrel, badger or fox, and is usually seen on the dirt mound close to its nesting burrow, or on a nearby fencepost.

Burrowing owls sometimes form loose colonies. However, it is now unusual to find a colony in Alberta with more than five pairs.

The main foods of the burrowing owl are insects (usually grasshoppers, beetles and crickets), small rodents (mice and voles), birds, frogs, toads, salamanders and snakes. This owl is active both night and day, unlike many other owls, which are active only at night.

The burrowing owl is migratory and breeds in the province between April and September.

STATUS

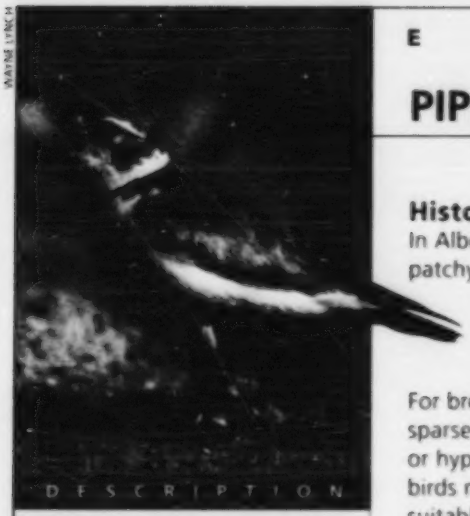
Alberta: Threatened; status maintained in 2000

Saskatchewan, Manitoba and British Columbia: Endangered

Canada (COSEWIC): Endangered; uplisted from Threatened in 1999

USA: Iowa, Minnesota—Endangered; California, Idaho, Montana, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, Wyoming—Special Concern

PIPING PLOVER (*Charadrius melodus*)



DESCRIPTION

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This species is migratory, staying in Alberta from late April to early August.

History

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For breeding, it prefers unvegetated or sparsely vegetated beaches of alkaline or hyper-saline lakes or ponds, and the birds nest wherever they can find suitable habitat. As a result, the use of specific lakes within the piping plover's Alberta range, as well as the population size, vary from year to year. The majority of the Alberta population of 220 to 300 birds is generally found on fewer than 10 lakes in any one year.

The piping plover depends on natural water fluctuations to remove vegetation and expose appropriate nesting habitat on lake or pond shorelines, so problems may result when water levels of lakes are stabilized for recreation or other uses. Breeding success can also be negatively influenced by predation, livestock activity, off-road vehicles and competition with people for the use of beaches.

The North American population of this species is declining. Although Alberta's piping plovers are part of a relatively stable prairie population, evidence indicates that they are no longer breeding on lakes where they have traditionally been found. Therefore, strong conservation measures are needed.

Management

The piping plover is an "endangered" species in Alberta, and it is illegal to harm this bird or its nests in the province, anywhere or at any time.

The Alberta government has been monitoring the piping plover population in the province since the 1980s. Management to support this species has included protecting habitat by means of land purchase or long-term agreements with landowners, fencing critical shorelines to keep cattle away, management of water levels and vegetation on traditional nesting beaches, and public education. Alberta also participates on a national recovery team for the piping plover. However, after 10 years of management, the Alberta piping plover population remains very small and vulnerable.

Key to conserving this species is the continued and increased protection of its nesting sites from disturbance. Because the breeding population moves between lakes, all potential breeding sites have to be protected, even when they are not in use, to prevent any reduction in habitat.

A provincial recovery plan for the piping plover will be completed in 2002. Pending the completion and implementation of the recovery plan, government land use management systems on crown land and for government-regulated activities will be strengthened to ensure no loss of nests due to managed activities. As well, landowners and disposition holders will be contacted to put in place voluntary conservation measures and/or negotiate cooperative management strategies.

STATUS

Alberta: Endangered; uplisted from Threatened in 2000

Saskatchewan/ Manitoba: Endangered

Canada (COSEWIC): Endangered

USA: Great Lakes population—Endangered; Great Plains and Atlantic populations—Threatened

T H R E A T E N E D

BURROWING OWL (*Athene* [formerly *Speotyto*] *cunicularia*)

History

In Alberta, this species inhabits areas of dry shortgrass prairie in the grassland natural region of the southeastern part of the province. Historically, its range extended into the southern parkland region. At present, most of the Alberta's burrowing owls are found in areas grazed by livestock.

The burrowing owl population in Canada and Alberta has suffered a serious decline. A 1994-1995 survey resulted in an estimate of 842 pairs in the province. These figures indicate about a 30 percent decline in Alberta in 10 years.

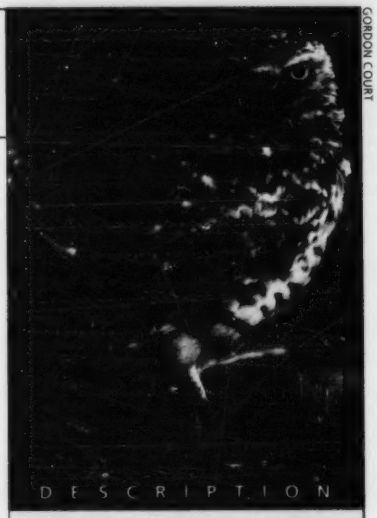
Cultivation of the grasslands in Alberta, which was extensive in 1976 to 1986, destroys burrows and reduces hunting territory. Habitat has also been lost through oil and gas exploration and development, road construction and expansion of human settlement. Populations of ground squirrels, badgers and other burrowing animals have decreased, reducing the number of burrows available for burrowing owl nesting.

Burrowing owls have also been accidentally poisoned through programs aimed at ground squirrels and insects. Use of agricultural chemicals has been linked to a reduction in the number of young produced by the owls. Some owls have been killed by vehicle collisions and others shot (mistakenly or not) at their burrows. The burrowing owl's close association with Richardson's ground squirrels (gophers) has been to its detriment.

Management

A national recovery plan for the burrowing owl has been in place since 1995. However, recovery efforts have not been successful at stopping the decline in the burrowing owl population or identifying the key factors causing the decline. Attempts to reverse the population trend have been hampered by a lack of information about changes on the owl's breeding grounds. Recent evidence suggests that decreasing prey abundance on the prairies (and consequent reductions in owl productivity) may be a key factor in the decreasing owl numbers.

A provincial recovery plan to assist this species will be completed by 2001. While the recovery plan is being developed, policy and management to ensure protection of all burrowing owl nests on crown land is to be implemented. Essential conservation actions will include the expanded monitoring of distribution, nesting productivity and population trends. A non-government program, Operation Burrowing Owl, encourages landowners to voluntarily protect burrowing owl nest sites on their properties (see <www.unibase.com/~naturesk/burrowl.html>).



GORDON COURT

DESCRIPTION

The burrowing owl is a small owl that lives in the open grasslands of southeastern Alberta. It nests in an unoccupied burrow of a ground squirrel, badger or fox, and is usually seen on the dirt mound close to its nesting burrow, or on a nearby fencepost.

Burrowing owls sometimes form loose colonies. However, it is now unusual to find a colony in Alberta with more than five pairs.

The main foods of the burrowing owl are insects (usually grasshoppers, beetles and crickets), small rodents (mice and voles), birds, frogs, toads, salamanders and snakes. This owl is active both night and day, unlike many other owls, which are active only at night.

The burrowing owl is migratory and breeds in the province between April and September.

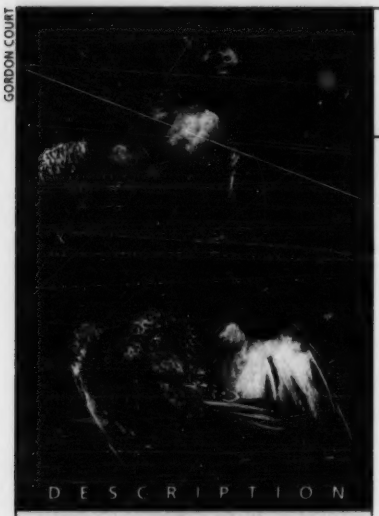
STATUS

Alberta: Threatened; status maintained in 2000

Saskatchewan, Manitoba and British Columbia: Endangered

Canada (COSEWIC): Endangered; uplisted from Threatened in 1999

USA: Iowa, Minnesota—Endangered; California, Idaho, Montana, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, Wyoming—Special Concern



GORDON COURT

T H R E A T E N E D

PEREGRINE FALCON (*Falco peregrinus*)

DESCRIPTION

Three subspecies of peregrine falcon can be found in Canada, but only the *anatum* subspecies breeds in Alberta.

This falcon prefers to nest on the ledges of rocky cliffs or cutbanks, although some nest on high buildings or bridges in urban areas.

The peregrine is considered by many to be the world's fastest animal. In level flight it can reach speeds of up to 100 kilometres per hour; when diving to capture prey (mainly birds), nearly 300 kilometres per hour.

The peregrine falcon is migratory, arriving in Alberta in April and leaving by October.

History

The peregrine falcon has never been common, but before the middle of the 20th century, it could be found in every natural region in Canada. In the mid-1960s, peregrine numbers dropped dramatically, primarily because of organochlorine pesticide (mainly DDT) contamination. The pesticides caused reproductive failure, including the thinning of eggshells. The decline was especially pronounced in the *anatum* subspecies.

By 1972, DDT was banned in Canada and the United States and intensive management to recover the peregrine falcon began. Now, after more than 25 years of management and reintroductions, the Alberta subspecies appears to be increasing.

At present, 47 breeding pairs of peregrines are known to exist in Alberta. In the early 1970s, only 3 nesting pairs were found in northwestern Alberta, and only 1 pair was known south of the boreal forest. Researchers were familiar with at least 70 historic breeding sites south of 56th parallel before the population declined.

The present range of this species in Alberta is patchy and discontinuous. The birds are most likely to be seen in the northeast corner of the province, in or near Edmonton and Calgary, and on cliffs along rivers in central and southern Alberta (Bow and Red Deer river drainages).

Management

In 1978, the peregrine falcon was declared an "endangered" species by COSEWIC, and a national recovery plan was approved in 1987. Restriction of organochlorine pesticide use in North America, declining use of DDT in other parts of the world and innovative management efforts have resulted in a partial recovery, which has been particularly rapid in the last five to ten years.

Large-scale reintroduction of captive-raised peregrines was discontinued in Alberta in 1996, although some population management is ongoing. Because the Alberta population is still very small and most of the current population in southern Alberta is made up of birds reared in captivity, the peregrine falcon in the province remains vulnerable.

Based on the recommendation of the Endangered Species Conservation Committee, the status of the peregrine falcon in Alberta has been downlisted to "threatened" from "endangered."

Within two years, a provincial recovery plan for the peregrine falcon will be prepared. Management of peregrines while the recovery plan is being completed includes participation in the Canadian National Peregrine Falcon Survey in the summer of 2000, plus continued monitoring and supplementation (with captive-bred chicks) of peregrine nests in southern Alberta.

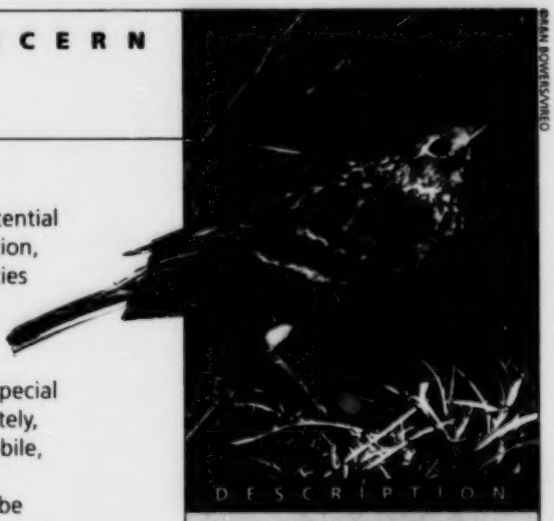
STATUS

Alberta: Threatened; downlisted from Endangered in 2000

Canada (COSEWIC): Threatened (*Falco peregrinus anatum*); downlisted from Endangered in 1999

USA: Delisted (removed from national endangered species list) in 1999; Montana—Endangered

SPRAGUE'S PIPIT (*Anthus spragueii*)



This small elusive bird has the typical camouflage colours of the prairies and is more likely to be heard than seen. The male courtship song, a descending series of musical notes, delivered while flying on long display flights, is the strongest evidence that the species is present.

Sprague's pipit is a ground-nester, preferring to nest in dense, grassy and relatively tall vegetation. It mainly eats grasshoppers, beetles and other insects and spiders picked off the ground and vegetation. It may also eat seeds.

This species is migratory and is in Alberta from late April to mid-September. It overwinters in the southern United States and northern Mexico.

History

Sprague's pipit has been a common grassland songbird in Alberta that also breeds sporadically in the central parkland. Its breeding range once extended from southern Alberta north to Athabasca and the Peace River district, then west to the foothills of the Rockies, but no longer includes northern areas. Although Alberta is at the northwest corner of its range, the province has the highest densities of Sprague's pipit on the continent.

The population of this pipit in Alberta is thought to be in the tens to hundreds of thousands (no truly accurate estimate is available). However, its numbers appear to have declined significantly in recent years in the province (slightly less than 20 percent in the last decade), and at a slower rate throughout its North American range, except in Montana, where numbers hve been increasing slightly.

This species avoids areas with introduced grasses and cultivated lands (pastures, hayfields and croplands), as well as any area with heavy vegetation cover. A significant proportion of native grassland is now used for agricultural purposes, and both modification and loss of this species' native habitat have likely been major factors in the population decline. Sprague's pipit tolerates light to moderate grazing in parkland areas, but likely not in arid grasslands. Reduced fire frequency, and haying, of native grasslands also negatively affect this species.

Because of its large historic decline (the reasons for which are not completely clear) and the potential for continuing habitat alteration, the Alberta Endangered Species Conservation Committee has recommended that Sprague's pipit be recognized as a "species of special concern" in Alberta. Fortunately, Sprague's pipits are quite mobile, so recolonization of suitable habitat is likely should there be extensive population loss in Alberta.

Management

Sprague's pipit has been identified as a "species of special concern" by the Alberta Endangered Species Conservation Committee (ESCC), although its present official designation under the Alberta *Wildlife Act/Regulation* is "non-game Animal." Alberta Environment will respond to the ESCC recommendation by developing appropriate means of identifying, conserving and managing this species. These measures include active monitoring and assessment of the Sprague's pipit population in Alberta.

STATUS

Alberta: Species of Special Concern; recommended in 2000

Saskatchewan, Manitoba: Not listed

Canada (COSEWIC): Threatened

USA: Not listed federally; Minnesota—Endangered; North Dakota—State Rare; South Dakota—Imperiled Because of Rarity

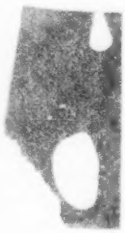
DESCRIPTION

Three subspecies of peregrine falcon can be found in Canada, but only the *anatum* subspecies breeds in Alberta.

This falcon prefers to nest on the ledges of rocky cliffs or cutbanks, although some nest on high buildings or bridges in urban areas.

The peregrine is considered by many to be the world's fastest animal. In level flight it can reach speeds of up to 100 kilometres per hour; when diving to capture prey (mainly birds), nearly 300 kilometres per hour.

The peregrine falcon is migratory, arriving in Alberta in April and leaving by October.



T H R E A T E N E D

PEREGRINE FALCON (*Falco peregrinus*)

History

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By 1972, DDT was banned in Canada and the United States and intensive management to recover the peregrine falcon began. Now, after more than 25 years of management and reintroductions, the Alberta subspecies appears to be increasing.

At present, 47 breeding pairs of peregrines are known to exist in Alberta. In the early 1970s, only 3 nesting pairs were found in northwestern Alberta, and only 1 pair was known south of the boreal forest. Researchers were familiar with at least 70 historic breeding sites south of 56th parallel before the population declined.

The present range of this species in Alberta is patchy and discontinuous. The birds are most likely to be seen in the northeast corner of the province, in or near Edmonton and Calgary, and on cliffs along rivers in central and southern Alberta (Bow and Red Deer river drainages).

Management

In 1978, the peregrine falcon was declared an "endangered" species by COSEWIC, and a national recovery plan was approved in 1987. Restriction of organochlorine pesticide use in North America, declining use of DDT in other parts of the world and innovative management efforts have resulted in a partial recovery, which has been particularly rapid in the last five to ten years.

Large-scale reintroduction of captive-raised peregrines was discontinued in Alberta in 1996, although some population management is ongoing. Because the Alberta population is still very small and most of the current population in southern Alberta is made up of birds reared in captivity, the peregrine falcon in the province remains vulnerable.

Based on the recommendation of the Endangered Species Conservation Committee, the status of the peregrine falcon in Alberta has been downlisted to "threatened" from "endangered."

Within two years, a provincial recovery plan for the peregrine falcon will be prepared. Management of peregrines while the recovery plan is being completed includes participation in the Canadian National Peregrine Falcon Survey in the summer of 2000, plus continued monitoring and supplementation (with captive-bred chicks) of peregrine nests in southern Alberta.

STATUS

Alberta: Threatened; downlisted from Endangered in 2000

Canada (COSEWIC): Threatened (*Falco peregrinus anatum*); downlisted from Endangered in 1999

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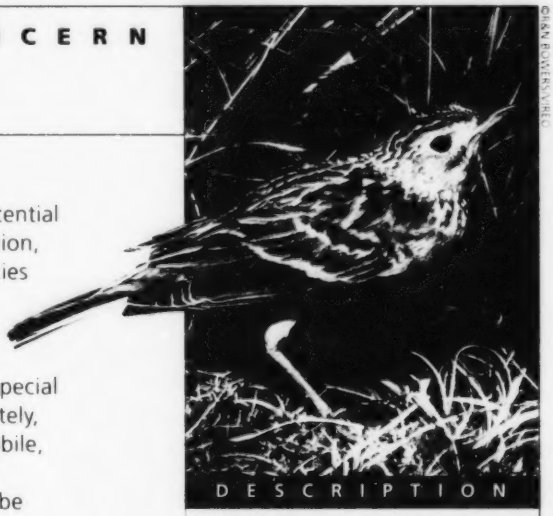

History

Sprague's pipit has been a common grassland songbird in Alberta that also breeds sporadically in the central parkland. Its breeding range once extended from southern Alberta north to Athabasca and the Peace River district, then west to the foothills of the Rockies, but no longer includes northern areas. Although Alberta is at the northwest corner of its range, the province has the highest densities of Sprague's pipit on the continent.

The population of this pipit in Alberta is thought to be in the tens to hundreds of thousands (no truly accurate estimate is available). However, its numbers appear to have declined significantly in recent years in the province (slightly less than 20 percent in the last decade), and at a slower rate throughout its North American range, except in Montana, where numbers hve been increasing slightly.

This species avoids areas with introduced grasses and cultivated lands (pastures, hayfields and croplands), as well as any area with heavy vegetation cover. A significant proportion of native grassland is now used for agricultural purposes, and both modification and loss of this species' native habitat have likely been major factors in the population decline. Sprague's pipit tolerates light to moderate grazing in parkland areas, but likely not in arid grasslands. Reduced fire frequency, and haying, of native grasslands also negatively affect this species.

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Management

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DESCRIPTION

This small elusive bird has the typical camouflage colours of the prairies and is more likely to be heard than seen. The male courtship song, a descending series of musical notes, delivered while flying on long display flights, is the strongest evidence that the species is present.

Sprague's pipit is a ground-nester, preferring to nest in dense, grassy and relatively tall vegetation. It mainly eats grasshoppers, beetles and other insects and spiders picked off the ground and vegetation. It may also eat seeds.

This species is migratory and is in Alberta from late April to mid-September. It overwinters in the southern United States and northern Mexico.

STATUS

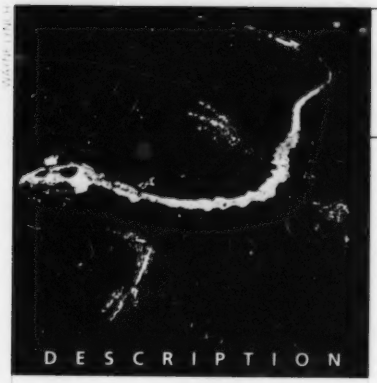
Alberta: Species of Special Concern; recommended in 2000

Saskatchewan, Manitoba: Not listed

Canada (COSEWIC): Threatened

USA: Not listed federally; Minnesota—Endangered; North Dakota—State Rare; South Dakota—Imperiled Because of Rarity

LONG-TOED SALAMANDER (*Ambystoma macrodactylum*)



DESCRIPTION

The long-toed salamander needs both aquatic and terrestrial habitats for its survival. It is almost entirely nocturnal.

This species breeds in the shallow area of lakes or permanent ponds, or in wetlands. Large permanent lakes without predatory fish support the most long-toed salamanders. Eggs are laid singly or in clumps on aquatic vegetation, twigs, logs or rocks. The eggs hatch after a few weeks into larvae, which usually overwinter before changing form.

In the summer, juvenile or adult long-toed salamanders find shelter under rocks, rotting logs or other debris in areas with high soil moisture and thick leaf litter near relatively permanent water bodies.

Little is known about this species' overwintering habits except that adults probably spend winter underground where the soil is moist but won't freeze.

History

There are nine population groupings of the long-toed salamander in Alberta, most of which are found in the front range of the Rocky Mountains. Some isolated outlying populations are also found elsewhere in the western part of the province.

There is no population estimate for this species in Alberta; however, limited studies indicate the population likely exceeds 10,000 individuals. There is also minimal information on population trends and changes in distribution. However, several sites with breeding populations have been drastically altered recently, with loss of the salamanders.

The main problems faced by long-toed salamanders are the introduction of predatory game fish in breeding ponds and lakes, habitat loss because of wetland drainage for industrial and recreational development, and road-building that separates breeding and hibernation habitats.

It is possible that the nine groupings of long-toed salamanders are isolated. Because this species has little ability to extend its range, it is highly unlikely an extirpated grouping would be recolonized from another area. Therefore, the population is vulnerable to regional extinction should breeding ponds be disturbed or degraded. The loss of a single breeding pond becomes significant.

Management

The Endangered Species Conservation Committee (ESCC) has recommended that the long-toed salamander be recognized as a "species of special concern." At present, this salamander is designated as a "non-game animal" under the Alberta *Wildlife Act/Regulation*. As a result of the ESCC recommendation, Alberta Environment will identify and implement conservation and management measures for this species.

For example, more specific information is needed about the size of the population of long-toed salamanders and population trends. The rate of decline that is suspected from information that several breeding sites have recently been degraded needs to be quantified. Alberta Environment will collect more information on the population size, distribution and trend of this species. It could be assisted in this effort by the volunteer network of the Alberta Amphibian Monitoring Program. Alberta Environment will also undertake active management of known breeding sites of this species, wherever possible, and ensure that the needs of the long-toed salamander are addressed in land use decisions and approvals.

STATUS

Alberta: Species of Special Concern; recommended in 2000

British Columbia: Yellow List (not at risk, will be protected through ecosystem management)

Canada (COSEWIC): Not yet assessed

USA: California (*Ambystoma macrodactylum croceum*)—Endangered

PRAIRIE RATTLESNAKE (*Crotalus viridis*)

DESCRIPTION

There are eight subspecies of western rattlesnake (*Crotalus viridis*) in North America, but only one, the prairie rattlesnake (*Crotalus viridis viridis*), is found in Alberta. What is most distinctive about this snake is the "rattle" at the end of its tail, although it may break off on some snakes. The prairie rattler is the only venomous snake in Alberta, but its bite is rarely fatal.

The prairie rattlesnake is usually seen in areas of rock outcrops or rock piles. It hibernates from late September to late April in denning sites called hibernacula, which are located in mammal burrows, rock crevices and caves. The gathering of rattlers in hibernacula (especially in fall, winter and spring), as well as high fidelity to the den site (prairie rattlesnakes return over and over to the same den), increase the vulnerability of this species to disturbance. Maintenance of overwintering sites, along with hunting, basking and birthing areas a reasonable distance from the hibernacula, is critical for the survival of the prairie rattlesnake.

History

The prairie rattlesnake is found in the mixedgrass and shortgrass prairie of the grassland natural region in southeastern Alberta. It is usually associated with river banks, coulees, badlands and sageflats, and sometimes farmers' fields.

The overall numbers of this rattler appear to have decreased, although there is not enough information available to estimate a rate of decline. Studies show that, at several sites, snake dens have been destroyed, become inactive or accommodate many fewer snakes than in the past. There are likely thousands of prairie rattlesnakes in Alberta, but indications are that this species may take a long time to recover from a decline.

Although this snake's distribution has decreased significantly from historical levels, it appears to have remained relatively stable in the last 20 years. The prairie rattlesnake is at the northern limit of its North American range in Alberta.

The main problems faced by the prairie rattlesnake are loss of suitable habitat due to human activities (increased grazing, road construction, oil and gas activity) and intentional persecution (killing of snakes and vandalism/destruction of hibernacula). Changes in attitudes have reduced but not eliminated the latter problem.

The prey of the prairie rattlesnake is small mammals, birds, amphibians (frogs, toads, salamanders) and other reptiles. Because its prey includes rodents, rattlers can be highly beneficial to farmers and ranchers.

Management

The prairie rattlesnake is designated as a "non-game animal" under the Alberta *Wildlife Act/Regulation*, which makes it illegal to kill, possess, buy or sell rattlesnakes in Alberta. The snake can only be killed if it poses a threat to safety. The Endangered Species Conservation Committee recommended that the *Wildlife Regulation* be amended to provide year-round protection to rattlesnake dens (in the past, they were protected only from September 1 to April 30), and this additional protection is now law.

Alberta Environment will also collect more information on the population size, distribution and population trend of this species in Alberta and will monitor several active rattlesnake hibernacula in the province. It will use the information gathered to assess the status of the prairie rattler within the next five years.

STATUS

Alberta: Data Deficient; recommended in 2000

Saskatchewan: Being considered for listing

British Columbia: Blue List (vulnerable or sensitive)

USA: Not listed

LONG-TOED SALAMANDER (*Ambystoma macrodactylum*)

WAYNE LYNCH

DESCRIPTION

The long-toed salamander needs both aquatic and terrestrial habitats for its survival. It is almost entirely nocturnal.

This species breeds in the shallow area of lakes or permanent ponds, or in wetlands. Large permanent lakes without predatory fish support the most long-toed salamanders. Eggs are laid singly or in clumps on aquatic vegetation, twigs, logs or rocks. The eggs hatch after a few weeks into larvae, which usually overwinter before changing form.

In the summer, juvenile or adult long-toed salamanders find shelter under rocks, rotting logs or other debris in areas with high soil moisture and thick leaf litter near relatively permanent water bodies.

Little is known about this species' overwintering habits except that adults probably spend winter underground where the soil is moist but won't freeze.

History

There are nine population groupings of the long-toed salamander in Alberta, most of which are found in the front range of the Rocky Mountains. Some isolated outlying populations are also found elsewhere in the western part of the province.

There is no population estimate for this species in Alberta; however, limited studies indicate the population likely exceeds 10,000 individuals. There is also minimal information on population trends and changes in distribution. However, several sites with breeding populations have been drastically altered recently, with loss of the salamanders.

The main problems faced by long-toed salamanders are the introduction of predatory game fish in breeding ponds and lakes, habitat loss because of wetland drainage for industrial and recreational development, and road-building that separates breeding and hibernation habitats.

It is possible that the nine groupings of long-toed salamanders are isolated. Because this species has little ability to extend its range, it is highly unlikely an extirpated grouping would be recolonized from another area. Therefore, the population is vulnerable to regional extinction should breeding ponds be disturbed or degraded. The loss of a single breeding pond becomes significant.

Management

The Endangered Species Conservation Committee (ESCC) has recommended that the long-toed salamander be recognized as a "species of special concern." At present, this salamander is designated as a "non-game animal" under the Alberta *Wildlife Act/Regulation*. As a result of the ESCC recommendation, Alberta Environment will identify and implement conservation and management measures for this species.

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STATUS

Alberta: Species of Special Concern; recommended in 2000

British Columbia: Yellow List (not at risk, will be protected through ecosystem management)

Canada (COSEWIC): Not yet assessed

USA: California (*Ambystoma macrodactylum croceum*)—Endangered

PRAIRIE RATTLESNAKE (*Crotalus viridis*)

History

The prairie rattlesnake is found in the mixedgrass and shortgrass prairie of the grassland natural region in southeastern Alberta. It is usually associated with river banks, coulees, badlands and sageflats, and sometimes farmers' fields.

The overall numbers of this rattler appear to have decreased, although there is not enough information available to estimate a rate of decline. Studies show that, at several sites, snake dens have been destroyed, become inactive or accommodate many fewer snakes than in the past. There are likely thousands of prairie rattlesnakes in Alberta, but indications are that this species may take a long time to recover from a decline.

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The prairie rattlesnake is usually seen in areas of rock outcrops or rock piles. It hibernates from late September to late April in denning sites called hibernacula, which are located in mammal burrows, rock crevices and caves. The gathering of rattlers in hibernacula (especially in fall, winter and spring), as well as high fidelity to the den site (prairie rattlesnakes return over and over to the same den), increase the vulnerability of this species to disturbance. Maintenance of overwintering sites, along with hunting, basking and birthing areas a reasonable distance from the hibernacula, is critical for the survival of the prairie rattlesnake.

STATUS

Alberta: Data Deficient; recommended in 2000

Saskatchewan: Being considered for listing

British Columbia: Blue List (vulnerable or sensitive)

USA: Not listed

DESCRIPTION

The western blue flag is a member of the Iris family (Iridaceae) and is a long-lived perennial that grows from a thick underground rhizome. The plant is 30 to 60 centimetres tall, with long thin sword-like leaves. It relies on insects (usually bees) for pollination.

WESTERN BLUE FLAG (*Iris missouriensis*)

History

The western blue flag grows in damp sunny meadows where the soil is moist in the spring but dries later in the summer. The plant is found only in the extreme southwest corner of the province in sub-regions of the grassland and parkland natural regions. It is not found elsewhere in Canada. There are seven native population groupings known from an area of less than 800 km², a very limited distribution. (Four other locations, where the plant is thought to have been introduced, are also known.)

The western blue flag is at the northern edge of its range in Alberta, and healthy populations exist in many western states. However, the Alberta population of western blue flag at natural sites is declining. At six monitored sites, in three locations, an average decrease of 30 percent in number of stems was found between 1987 and 1998, equivalent to a loss of 27 percent in 10 years. Five of eight sites examined in 1987 had been modified or destroyed by human actions.

The western blue flag has very specific habitat requirements, which means that its habitat is easily damaged by human activities. Drainage, water diversion, cultivation and overgrazing are all problems faced by this species. However, the western blue flag does benefit from light to moderate cattle grazing. This plant is sensitive to herbicides.

Management

In 1997, the Alberta *Wildlife Act* was amended to allow designation, protection and recovery of threatened or endangered plants. The Endangered Species Conservation Committee since has recommended that the western blue flag be classified as a "threatened" species. However, appropriate standard protections for threatened and endangered plants in Alberta are still needed. While new regulations are being developed to protect Alberta's first plant to be officially designated as "threatened," Alberta Environment staff will contact landowners to identify their concerns and attempt to reach cooperative conservation agreements in preparation for official designation.

Because the western blue flag is a peripheral species in Alberta, the emphasis will be on conservation and management of the remaining population rather than reintroduction of plants. To this end, government land use management systems will be strengthened on crown land and for government-regulated activities. Most western blue flag sites are on private land, however, so landowner conservation initiatives will take precedence in this case. The distribution and population trends of this plant in Alberta will be closely monitored.

STATUS

Alberta: Ongoing consultations with landowners to determine appropriate actions; Threatened designation recommended by Endangered Species Conservation Committee

Canada (COSEWIC): Threatened

USA: Relatively rare in Nebraska and North Dakota but common to abundant in many other states where it occurs (Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, South Dakota, Washington, Wyoming, Utah)

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LESLIE DEGNER

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POLICY STATEMENT

for the Alberta Endangered Species Conservation Committee

The Alberta Endangered Species Conservation Committee (ESCC) is comprised of a balance of members from stakeholder groups representing resource-based land users, corporate and government land managers, conservation organizations and university scientists. Our mandate is to advise the Minister of Environment on matters relating to the identification, conservation and recovery of species at risk in Alberta. We feel these principles are important in a provincial and federal context.

We are operating from a core set of principles that include the following:

one The identification, conservation and recovery of threatened and endangered species, as well as prevention of extinction of species, are shared values of this committee and Albertans in general.

two The biological status of species should be determined by independent scientists using the best science available in an open and transparent process.

three In accordance with the precautionary principle as stated in the *Accord for Protection of Species at Risk in Canada*, where the balance of scientific information indicates a species is at risk, conservation and protective measures will be taken.

four Government has the responsibility to coordinate and facilitate the recovery of species. However, the success of a recovery plan depends on the knowledge and commitment of organizations and individuals who own, manage and use the land. Recovery teams must include these landowners/ land managers.

five Prevention and recovery programs for species at risk will be pursued by encouraging voluntary and cooperative, recovery and management efforts that cost-share on an equitable basis.

six This committee encourages the elimination of any government policy disincentives to landowners to protect species at risk.

Alberta Endangered Species Conservation Committee

The Aberta Endangered Species Conservation Committee (ESCC) was created by the Minister of Environmental Protection in April of 1998. Established under the authority of Section 9.1 of the *Wildlife Act*, the ESCC is charged with advising the Minister of Environment on matters relating to the identification, conservation and recovery of species at risk in Alberta.

Assessment of the biological status of species, and the identification of those that are at risk of extinction, rely on sound scientific evaluation of data and information available. The ESCC, therefore, includes members from the scientific community, and is supported by an independent Scientific Subcommittee.

While biological scientists can identify species at risk, and suggest appropriate recovery goals, the development and implementation of workable conservation and recovery programs requires the advice, knowledge and commitment of organizations and individuals who own, manage and use the land upon which species rely. The majority of the ESCC is therefore drawn from organizations representing land managers, resource users, conservation groups and government departments. This blend of sound science and a realistic understanding of land use management will provide a unique framework for incorporating socio-economic factors into the development and implementation of effective management and recovery programs.

Composition

The ESCC will be comprised of a balance of members from stakeholder groups representing resource-based land users, corporate and government land managers, conservation organizations and university scientists. Administrative and technical support will be provided by a Secretariat from Alberta Environment, Fisheries and Wildlife Management Division.

Scientific and technical support will also be provided by an independent Scientific Subcommittee.

Roles

To advise the Minister of Environment on matters relating to the identification and recovery of species at risk in Alberta; to recommend the necessary legal designations and protections for threatened and endangered species; to facilitate the planning and implementation of conservation and recovery programs; and to recommend actions that will prevent species from becoming at risk.

Decisions

Decisions will be made on the basis of consensus whenever possible, with recourse to a two-thirds majority vote of members if consensus is not possible. At least 50 percent of ESCC voting members will constitute a quorum.

Functions

- To develop, implement and revise appropriate operational procedures for the ESCC.
- To establish, appoint and provide general direction to an independent committee of scientific experts, the Scientific Subcommittee (SSC), who will use the best available information to assess the biological status of species suspected of being at risk in Alberta.
- To endorse species assessment criteria developed by the SSC for determining risk categories for species believed to be at risk.
- To receive the assessments of the SSC and recommend to the Minister the most appropriate response actions including, but not limited to, legal designations and protections, recovery programs and information needs.
- To facilitate the participation of stakeholders in the planning, review and implementation of recovery plans and programs.
- To review and report annually to Albertans on the progress of programs for the identification and recovery of species at risk in Alberta.
- To consider advice and recommendations received from Albertans regarding the conservation of species at risk.
- To establish ad hoc committees or working groups to provide advice on specific issues or to achieve specific tasks.

Secretariat

- To provide technical support to the ESCC (e.g., facilitating the compilation of current data, information and knowledge on candidate species, and the provision of information and data to members).
- To maintain a repository of information and provide information to the public.
- To provide administrative services, including planning meetings, financial and meeting records, contract administration, etc.
- To provide links to other provincial, national and international endangered species programs.
- To facilitate communication and information flow between the ESCC and the SSC.

Scientific Subcommittee of the Alberta Endangered Species Conservation Committee

Authority to establish the Scientific Subcommittee of the Alberta Endangered Species Conservation Committee (ESCC) was created by the Minister of Environmental Protection in April of 1998 (Ministerial Order 18/98). Section 9.1 of the *Wildlife Act* indicates that the ESCC shall establish, appoint and maintain an independent scientific subcommittee to study and assess Alberta species and to recommend, to the ESCC, organisms that should be established as endangered species.

The Scientific Subcommittee will use the best data, information and knowledge available to assess the biological status of species that may be at risk of extinction in Alberta. It will use an independent, open and transparent, science-based process in the assessment of species at risk, and will report its assessments to the ESCC and subsequently to the public.

The independence of the Scientific Subcommittee, and the objective scientific base for identifying species at risk in Alberta, are essential elements of the ESCC structure. They will help establish the credibility of the process and will create a common base upon which the diverse members of the ESCC can develop and implement conservation and recovery programs.

Composition

The Scientific Subcommittee (SSC) will be comprised of an independent group of scientists with expertise in fields such as conservation biology, ecology, taxonomy, wildlife management and population biology. Membership is balanced to include individuals with expertise in a broad diversity of taxa, including fish, mammals, birds, amphibians and reptiles, vascular plants, non-vascular plants and invertebrates. Candidates are nominated by the SSC and approved by the ESCC.

Administrative and technical support for the SSC is provided by a Secretariat from Alberta Environment comprised of one individual from the Fisheries and Wildlife Management Division and one individual from the Recreation and Protected Areas Division.

Role

The SSC will use the best available scientific information to assess the status of species that are suspected of being at risk in Alberta; will develop and publish lists of species at risk; and will provide advice, information and recommendations to the ESCC and the public. The general assessment process will be developed by the SSC, approved by the ESCC, and applied by the SSC in an independent, open and transparent, science-based manner.

Decisions

Decisions are made on the basis of consensus whenever possible, with recourse to a two-thirds majority vote of members present if consensus is not possible.

Reporting

The SSC will summarize the results of its species status assessments in written form and present them to the next meeting of the ESCC. Without undue delay, the ESCC will forward these status assessments, together with the ESCC recommendations for designation and conservation action, to the Minister of Environment. Upon receipt by the Minister, the SSC status assessments become public.

Functions

- To develop and periodically review scientific definitions, criteria and guidelines to be used to assess and identify species at risk in Alberta.
- To review the general status of species within each taxonomic group and develop priorities for detailed species status assessments.
- To assess the Alberta status of species listed by COSEWIC as nationally threatened or endangered.
- To establish terms of reference for, and commission preparation of, detailed status reports on priority candidate species, and to receive unsolicited status reports that meet the scientific criteria.
- To review draft status reports with outside experts, and ensure accuracy, completeness, quality of analysis and application of relevant listing criteria.
- To apply scientific criteria and guidelines to information compiled on candidate species and develop lists of species at risk in Alberta.
- To annually publish lists of species at risk in Alberta and to provide information, advice and recommendations to the ESCC.

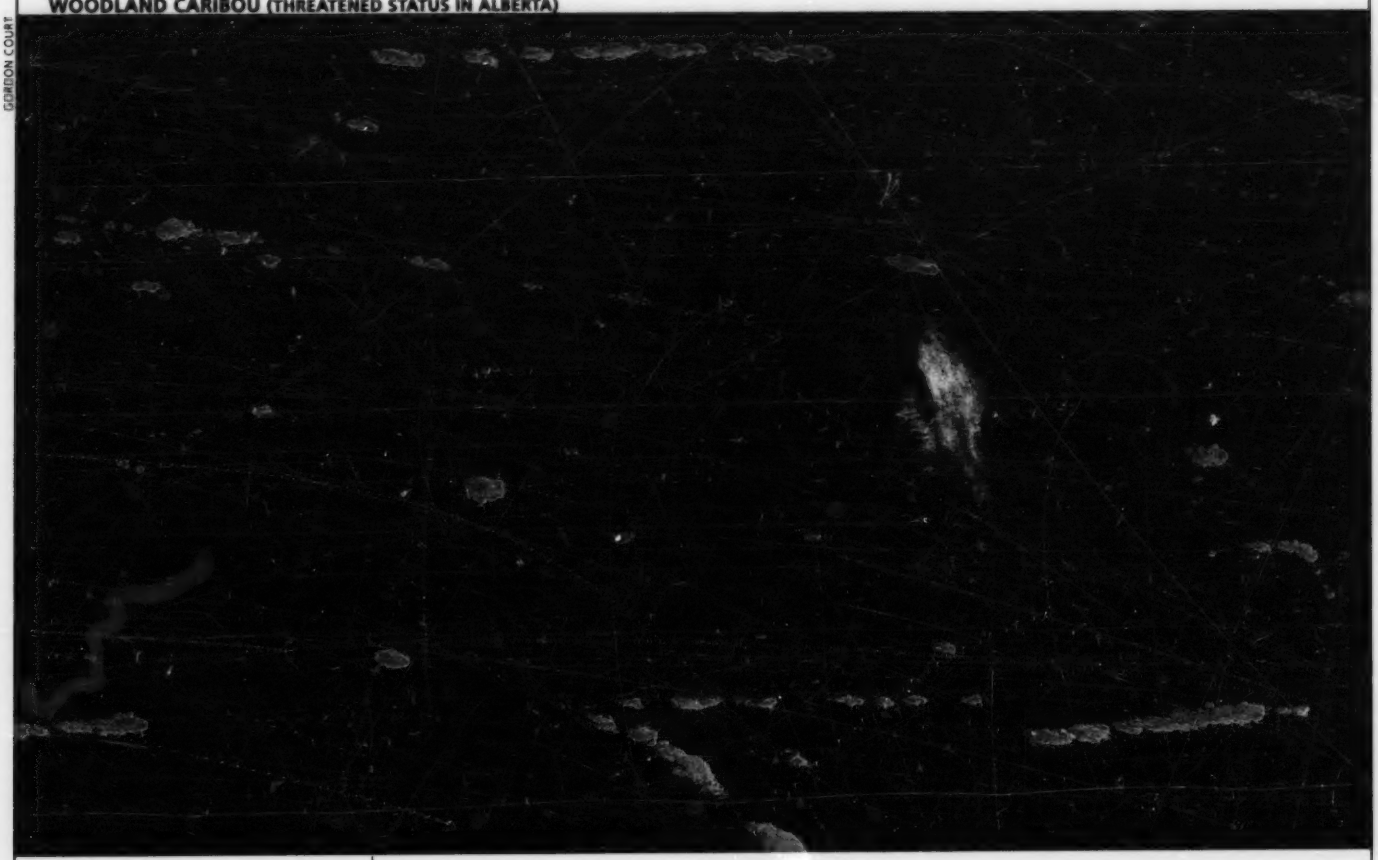
- To develop, implement and revise appropriate operational procedures for the functioning of the SSC, including the creation and direction of subsidiary working groups and subcommittees.

Secretariat

- To be appointed by the Director of Wildlife.
- To provide an assessment of the general status of wild species in Alberta to assist in the prioritization of species for detailed assessment.
- To provide technical support to the SSC (e.g., facilitating the compilation of current data, information and knowledge on candidate species).
- To publish and distribute information produced by or for the SSC, including detailed status reports, status assessments and lists of species at risk.
- To provide administrative services, including planning meetings, financial and meeting records, contract administration, etc.
- To provide links to other provincial, national and international endangered species programs.

WOODLAND CARIBOU (THREATENED STATUS IN ALBERTA)

GORDON COURT



Alberta Agriculture,
Food and Rural Development
www.agric.gov.ab.ca

Alberta Association of Municipal
Districts and Counties
www.aamdc.com

Alberta Cattle Commission
www.cattle.ca/acc

Alberta Conservation Association
www.gov.ab.ca/env/
fw/aca.html

Alberta Environment
www.gov.ab.ca/env

Alberta Fish and Game Association
www.afga.org

Alberta Forest Products Association
www.abforestprod.org

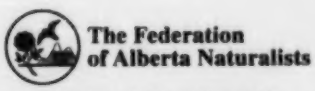
Alberta Irrigation Projects Association
www.aipa.org

Alberta Native Plant Council
www.anpc.ab.ca

Alberta Resource Development
www.resdev.gov.ab.ca

Calgary Zoo
www.calgaryzoo.ab.ca

Canadian Association
of Petroleum Producers
www.capp.ca



Federation of Alberta Naturalists
www.connect.ab.ca/~fan

Special Areas Board
www.specialareas.ab.ca

The Wildlife Society - Alberta Chapter
www.albertadirectory.com/actws

Treaty 8 First Nations
of Alberta

www.treaty8.org

University of Alberta
Dept. of Biological Sciences
www.biology.ualberta.ca

University of Calgary
Dept. of Biological Sciences
www.ucalgary.ca/UofC/
faculties/SC/BI

Western Stock Growers' Association

Western Stock Growers' Association
www.cattle.ca/
Cattle_Organizations/wsga-9w6